ABSTRACT

The present invention provides dermal cytochrome P450 1A (CYP1A) inhibitors, which include free base or pharmacologically acceptable salt of (-)-epicatechin, (+)-epicatechin, (+)-limonene, 3-phenylpropyl acetate, α-naphthoflavone, apigenin, baicalein, baicalin, β-myrcene, catechin, β-naphthoflavone, cineole, daidzein, daidzin, diosmin, ergosterol, formononetin, gallic acid, genistein, glycyrrhizin, glycyrrhizic acid, hesperetin, hesperidin, isoquercitrin, kaempferol, lauryl alcohol, luteolin, luteolin-7-glycoside, narigenin, narigin, nordihydroguaiaretic acid, oleanolic acid, paeoniflorin, quercetin, quercitrin, rutin, swertiamarin, terpineol, trans-cinnamaldehyde, trans-cinnamic acid, umbelliferone, genkwanin, homoorientin, isovitexin, neohesperidin, wongonin, capillarisin, liquiritin, ethyl myristate, poncirin, and ursolic acid. The CYP1A inhibitors can be co-administered with compounds with first-pass effect such as dermatological drugs to improve the bioavailability of the drugs. The present invention also provides dermal CYP1A enhancers, which include (+)-catechin, (-)-epicatechin, (+)-epicatechin, (+)-limonene, 3-phenylpropyl acetate, apigenin, baicalein, baicalin, β-myrcene, cineole, daidzein, daidzin, diosmin, ergosterol, formononetin, gallic acid, glycyrrhizin, hesperidin, isoquercitrin, kaempferol, lauryl alcohol, luteolin, luteolin-7-glycoside, narigin, nordihydroguaiaretic acid, paeoniflorin, protocatechuic acid, quercetin, quercitrin, rutin, swertiamarin, terpineol, trans-cinnamic acid, umbelliferone, and umbellic acid.